

ABSTRACT OF THE INVENTION

A mercury vapor discharge lamp is provided having either a yttria-dispersed alumina barrier layer, or a yttria-dispersed phosphor layer with no barrier layer.

5 The yttria-dispersed layer is preferably coated directly on the inner surface of the glass envelope of a fluorescent lamp, and substantially reduces mercury depletion via reaction with the glass envelope. Preferably, the yttria-dispersed layer also has a fine 10 coating of yttria deposited over the surfaces of the coating particles, and over the inner surface of the glass envelope. A method of preparing a coating layer having such a yttria coating, and yttria particles uniformly dispersed therethrough, is also provided.